Carpenter, Emily

From: Richard Cochran <rcochran@waterseng.com>
Sent: Friday, October 09, 2015 9:27 AM
To: Carpenter, Emily
Subject: Re: Chapter 8 Stakeholder workgroup meeting

I have the following comments on the pressure sewers:

1. 6 (B) 1 (B) IV - Isolation valves at 2,500'. - If there are valves at the intersections and stream crossings; what will these valves accomplish? Shutting them down would isolate an entire section of pumps which could be isolated by the intersection valves.

2. 6 (B) 2 - Cleanouts - Why install cleanouts? This is pressure pipe like a waterline. It won't allow for I/I; but, it will allow for SSO's and in a major way. If you need pigging pits then call out for them; but, on small systems, they are never used. If designed for scour velocities then there should be little need for pigging. Oversizing the line for future development becomes the concern.

3. 6 (B) 3 (F) - Air Valves - Installing air/vacuum valves at 1500 feet is very expensive and unnecessary. If you need points for initial testing, utilize tapping sleeves with corp stops. The air valves cannot be used for maintenance and repairs later. In fact, they will become a source of maintenance and repairs.

4. 6 (B) 6 - Pressure monitoring stations.- Why not call for pressure gauges on each of the grinder pump stations. If a clog develops in the pressure main, every pump station upstream of it will show high pressure and those downstream will show lower pressures. Installing separate stations on the mains only costs additional money and they won't be used later. In fact, they will be lost and potentially become a source of SSO's. Your air/vacuum valves at high points will take care of air lock.

5. 6 (D) 2 - Number of pumps - A simplex grinder pump is more than capable of handling 2 homes; however, I would suggest only allowing 2 homes on 1 simplex station. Duplex stations should be used for 3 or more homes. A new system can be designed more cost efficiently with a simplex station located between and serving 2 homes. With storage capacity in the wetwell, this should be no problem.

6. 6 (D) 5 - Gas tight. - This is in contradiction to 6 (D) 8. A vent does need to be provided.

7. 6 (D) 19 - Spare Parts - I think an inventory of 5% with a minimum of 2 pumps and 1 control panel would be better. Control panels do have issues which can prevent pumps from operating. If only 1 spare pump is inventoried for smaller systems, they can be left with 0 immediately after the installation of 1. This would help keep 1 pump on hand at ALL times. Note the larger systems would have more spares anyway.

8. 10 (A) - Design of Pressure Sewers - Should you provide the flow equation that you wish to see. Unlike gravity sewers, there are tables and equations based upon the total number of pumps which can/should be used to determine the maximum number of pumps running based upon the total number of pumps in that zone. Or is the department going to leave that design part up to the engineer?

Just my thoughts.

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